

## CLAIMS

- 1) Installation for fitting sleeves on products such as bottles, in which the products are fed upright, one behind the other, along a conveyor line and the sleeve is drawn from a sleeve supply by means of transfer elements from above the product, characterised in that it comprises
- a single supply of sleeves drawn from a sheath, and
  - 10 - two pairs (6, 7) of transfer elements (61, 71), each comprising two transfer elements mounted on either side of the conveyor line (DF) of products (P) and operating in alternation,
    - \* each transfer element (61, 71) being supported
    - 15 by a conveyor means in order to effect an active travel path along the side of the product (P) at the sleeve fitting station (E), in alternation with the transfer element of the other pair (6, 7), in order to pick up a
    - 20 sleeve (MA) and fit it on the product (P) whilst the conveyor means of the transfer element of the other pair displaces the latter on a return path, separate from the active travel path,
  - 25 - a means (3) for synchronising the products (P) and means for conveying the transfer elements (61, 71).
- 2) Installation as claimed in claim 1, characterised by
- 30 a means for synchronising the products (P) with respect to the transfer elements is provided in the form of an inlet star (3) which positions the products (P) upstream of the sleeve fitting station (E).

3) Installation as claimed in claim 1,  
characterised in that

the conveyor means for a transfer element (61, 71)  
5 comprises

- a carriage (9, 10) guided on a fixed track (11, 12)  
effecting an ascending and descending movement  
bearing the transfer element by means of an arm  
pivoting between a position in which it effects its  
10 active travel path and its return path by means of a  
control track (17-1, 17-2) accommodating a pulley  
(61-5, 61-6) borne by the transfer element (61),  
this track being displaced between an advanced  
position and a retracted position,
  - 15 \* which advanced position corresponds to the  
active travel path of the transfer element  
(61) as the carriage descends along the side  
of the product to be fitted with a sleeve,
  - \* whilst the retracted position corresponds to  
20 the return path of the transfer element (61)  
as the carriage ascends towards the start of  
the next active travel path of the transfer  
element,
- a means (18, 18-1, 18-2, 17-5, 17-6) for displacing  
25 the control track (17-2, 17-2) and
- a driving means (15, 16) for displacing the carriage  
(9, 10) along its track (11, 12).

4) Installation as claimed in claim 3,  
30 characterised in that  
the movement of the products (P) through the sleeve  
fitting station (E) is continuous and the tracks (11, 12)  
of the carriages (9, 10) are inclined with respect to the

conveyor line (DF) as a function of the active travel path to be effected during the displacement of the product to be fitted with a sleeve, so that the difference in the horizontal displacement speeds of the pair of transfer elements on their active travel path and that of the product to be fitted with a sleeve is zero.

5) Installation as claimed in claim 3, characterised in that the drive means for a carriage is provided in the form of a direct current motor (16) without a collector driving a belt (15) linked to a carriage (9, 10).

6) Installation as claimed in claim 3, characterised in that the means for displacing the control track is provided in the form of a rotating cam (18, 18-1, 18-2) co-operating with a pulley (17-5, 17-6) supported by the control track (17-1, 17-2).

7) Installation as claimed in claim 1 to 3, characterised in that each transfer element (61) comprises a drawing device (16-1) and a clamp (16-2) for clamping the sleeve against the drawing device during the active travel path of the sleeve fitting operation, and the control track (17-1, 17-2) of the transfer element (61) is split for the drawing device (16-1) and the clamp (16-2), which effect parallel movements during the active travel path but move towards one another at the start of the travel path to clamp the sleeve and then move apart at the end of the travel path in order to release the sleeve.

8) Installation as claimed in claim 1,  
characterised in that  
the unit comprising the tracks (11, 12) of the carriages  
(9, 10) and the control tracks (17-1, 17-2) is pivotably  
5 mounted on the installation frame.

9) Installation as claimed in claim 6,  
characterised in that  
the rotating cam has two cam paths, one for controlling  
10 the movement of the control track (17-1) of the drawing  
device (61-1) and the other for the control track (17-2)  
of the clamp (61-2).

10) Installation as claimed in claim 9,  
15 characterised in that  
the rotating cam (18) controls the movement of the two  
control tracks of the two transfer elements on a same  
side of the conveyor line.